

DOE – Medical and Infectious Disease Update – Wednesday, May 5, 2004

DOE weekly updates on Bird Flu, Human Influenza, West Nile Virus, or other illnesses and medical issues will continue as appropriate or as requested. The following information is current as of Thursday, May 6, 2004, 0700 hours, EST. Information presented is routinely taken from the Centers for Disease Control and Prevention (CDC), <http://www.cdc.gov/>, The World Health Organization (WHO), <http://www.who.int/en/>, the Department of Defense Global Emerging Infections Surveillance and Response System site, (DoD-GEIS) - <http://www.geis.hq.osd.mil/>, and other creditable sources.

Recent News

ALLERGY-The Accuweather page provides current air quality information with specific charts for **Grass Pollen, Overall Pollen, Ragweed Pollen**, and **Tree Pollen** ...

http://www.accuweather.com/adcbn/public/maps_index.asp?type=airq.

Directory Of DOE Site Medical Clinics Is Available On-Line: DOE clinic directors are urged to visit this site at the link below, and verify the accuracy of the information. Please send additions or corrections to Claudia Beach, RN, COHN, 301-903-9826, E-mail: claudia.beach@eh.doe.gov, or to the Editor ... <http://tis.eh.doe.gov/health/occhealth/directory.pdf>.

China confirms 3 more SARS cases – 5May2004, Toronto Star (REUTERS, aP) -- BEIJING—Three suspected cases of SARS in this Chinese capital have been confirmed, taking the number of victims of the latest outbreak to nine, the Health Ministry said yesterday. All three newly confirmed cases of the highly contagious deadly flu-like SARS were linked to one viral disease laboratory in Beijing, it said on its Web site <http://www.moh.gov.cn>. Only one of the nine has died. Six of the confirmed SARS patients were in stable condition in Beijing's Ditan hospital while a seventh confirmed patient in the capital was expected to be released from hospital after recording a normal temperature for 18 consecutive days, it said. No new suspected SARS cases had been reported, it added ...

http://www.thestar.com/NASApp/cs/ContentServer?pagename=thestar/Layout/Article_Type1&c=Article&cid=1083708610549&call_pageid=968332188854&col=968350060724.

Flesh-eating disease strikes third victim in Maritimes – 4May2004,

by Kevin Cox, **Globe and Mail** --A team of federal epidemiologists is in Saint John this morning looking for the source of the flesh-eating infection that has killed one person and made another seriously ill. Nova Scotia reported a case yesterday, bringing the number in the Atlantic region to three. An unidentified patient at South Shore Regional Hospital in Bridgewater is recovering after being treated in late April. The case is not believed to be related to the other two. Officials with Atlantic Health Sciences Corp. in Saint John have been looking for a common denominator in the case of a woman who died of necrotizing fasciitis on April 30, the same day a patient was diagnosed as having the potentially fatal disease at Saint John Regional Hospital ...

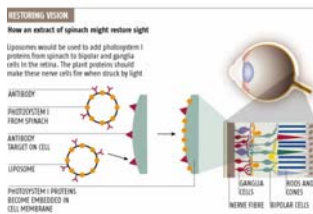
<http://www.globeandmail.com/servlet/story/RTGAM.20040504.wxfresh0504/BNStory/National/>

Spinach pigments proposed as blindness cure

– 2May2004, Duncan Graham-Rowe, **NewScientist** --A truly extraordinary cure for some forms of blindness is being proposed. The idea is to add light-absorbing pigments from spinach to nerve cells in the retina, to make the nerve cells fire when struck by light. Eli Greenbaum's team at the [Oak Ridge National Laboratories in Tennessee](#) has been exploring this possibility for several years. In their latest experiments, the researchers have shown that adding plant pigments to human cells makes the cells respond to light. The

BIOLOGICAL MOLECULE
Now an extract of spinach might restore sight
Uproseins would be used to add photopigment proteins from spinach to bipolar and ganglion cells in the retina. The plant proteins should make those nerve cells fire when struck by light.

The diagram illustrates the experimental approach. On the left, it shows the isolation of components from spinach: 'ANTIBODY' (represented by Y-shaped structures), 'PHOTOPHYCIN I FROM SPINACH' (represented by purple circular molecules), and 'ANTIBODY TARGET TAG ON LIGHT UPONABLE' (represented by yellow circular molecules). These are combined to form 'PHOTOPHYCIN I PROTEINS BECOME ENCASED IN CELL MEMBRANE'. An arrow points to a cross-section of a human eye, showing the 'RETINA' and 'OPTIC NERVE'. A magnified view of the retina shows 'GANGLION CELLS', 'BIPOLAR CELLS', and 'RODS AND CONES'. The spinach-derived protein complex is shown being introduced into the 'BIPOLAR CELLS' and 'GANGLION CELLS' via a 'NEURITE FIBRE'.



technique would restore only limited vision at best - people would be colour-blind, for instance - but Greenbaum thinks it could provide far better resolution than the electronic retinal implants being developed ... <http://www.newscientist.com/news/news.jsp?id=ns99994933>.

Researchers Confirm Genetic Link Between Hereditary Breast And Prostate Cancer

- 1May2004, NEW YORK, May 1, 2004 –A new study shows that the risk for prostate cancer is significantly elevated in men who are part of families with a hereditary form of breast and ovarian cancer. Researchers at [Memorial Sloan-Kettering Cancer Center](#) have determined that men in families carrying BRCA genetic mutations have a three- to five-fold increased risk of prostate cancer. "While the association between hereditary breast and prostate cancer has been suspected, this is the first study of its type to confirm the link," said Kenneth Offit, MD, Chief of the Clinical Genetics Service at Memorial Sloan-Kettering and senior author of the study, which is published in the May 1 issue of Clinical Cancer Research ... The results show that the frequency of certain BRCA1 and BRCA2 mutations was 5.2 percent in the prostate cancer cases compared to 1.9 percent in the healthy volunteers. When stratified by gene, the risk for prostate cancer was 4.8 times higher in carriers of a specific BRCA2 mutation than in the healthy individuals tested ...

<http://www.mskcc.org/mskcc/html/19906.cfm>.

Stomach device can make obese people feel full

- 29April2004, by *Lori Rackl*, Health Reporter, **The Chicago Sun-Times** --Researchers at Northwestern Memorial Hospital are testing what could be a new weapon in the war on obesity: a "pacemaker" for the stomach that tricks the body into feeling full. If the device fares well in a large nationwide clinical trial, it could serve as an alternative to more radical gastric bypass surgery, an increasingly popular procedure that's very effective at getting people to shed pounds but carries a sizable risk of complications. "The problem in America is people eat too much food, period," said Dr. Robert Kushner, lead investigator for Northwestern's study. "If we find this device is effective in producing a sense of fullness like the preliminary trials suggest, it can be a significant aid to people who have difficulty following a healthy, portion-controlled diet" ... <http://www.suntimes.com/output/news/cst-nws-pace29.html>.

'Living Bandages' Heal Burns with Patients' Cells

– 27April2004, by Patricia Reaney --LONDON (Reuters) - British scientists have developed "living bandages," made from a patient's own cells, which speed healing for burns and diabetes sufferers. The biological bandages, launched at the British Burns Association meeting on Tuesday, have been used successfully on patients with severe burns and diabetics with chronic wounds. "It is a convenient way of using the patient's own cells to heal wounds," Professor Sheila MacNeil, of the University of Sheffield, said in an interview. "This is a simple dressing to take laboratory-expanded cells and deliver them back to patients' wounds." MacNeil, who developed the bandages called Myskin with her Sheffield colleague Professor Robert Short, said the bandages can be placed on wounds five to seven days after a sample of cells has been taken from the patient and grown on specialized discs in the laboratory ...

<http://www.reuters.com/newsArticle.jhtml?type=scienceNews&storyID=4957682>.

Bird Flu 2003-2004: Doe Special Medical Update

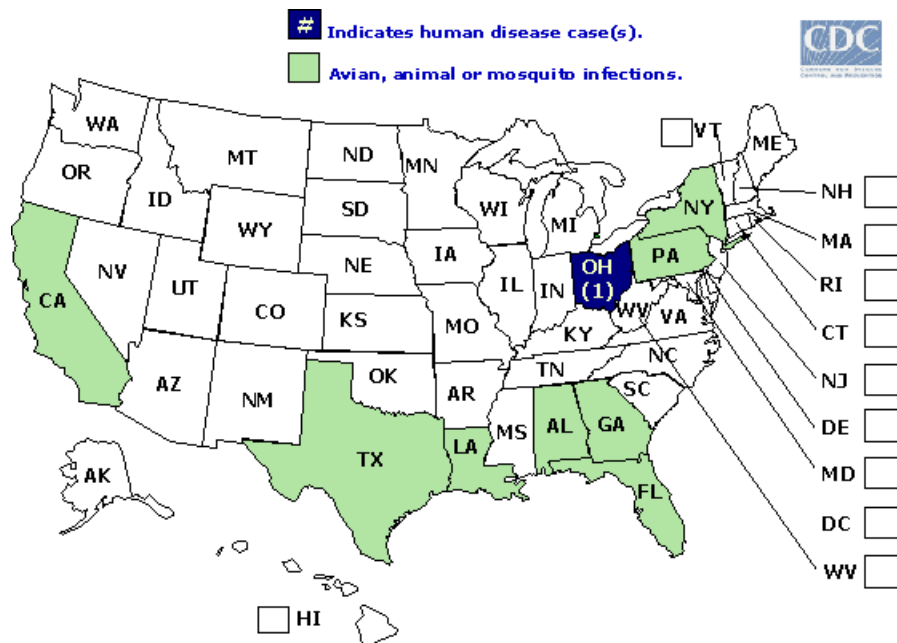
– With information from WHO and the CDC, this update also explains the concepts of viral infection, viral replication, antigenic "drift", and antigenic "shift" ... http://www.eh.doe.gov/health/news/BIRDFLU2003-2004_DOESPECIALUPDATE_B200402091.pdf (PDF) or for a choice of PDF or Word format, <http://www.eh.doe.gov/health/index.html>, and scroll down under "News and Features".

WHO: Avian influenza-fact sheet

– 5January2004-Avian influenza ("bird flu") and the significance of its transmission to humans ... http://www.who.int/csr/don/2004_01_15/en/.

2004 West Nile Virus Activity in the United States, reported to CDC. Maps reporting WNV avian and veterinary activity occurring during 2004 are updated regularly. Human disease cases have been reported in Ohio.

**2004 West Nile Virus Activity in the United States
(reported to CDC as of April 28, 2004*)**



*Currently, WNV maps are updated regularly to reflect surveillance reports released by state and local health departments to the CDC Arbonet system for public distribution. Map shows the distribution of avian, animal, or mosquito infection occurring during 2004 with number of human cases, by state. If West Nile virus infection is reported to CDC Arbonet in any area of a state, that entire state is shaded accordingly.

<http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

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